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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/363,733	07/30/1999	BYOUNG-JO J. KIM		8486

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EXAMINER


SHAH, CHIRAG G

ART UNIT	PAPER NUMBER
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2664

DATE MAILED: 01/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/363,733	Applicant(s) KIM ET AL. 	
	Examiner Chirag G Shah	Art Unit 2664	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 July 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 39-64 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 39-64 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|----------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 39, 43, 58 and 63 rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim 39 discloses a first transmission and reception scheme and protocol that is different from the second transmission and reception schema and protocol is not described in the specification to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim 43 discloses of a broadband interface unit coupled to a fixed wireless broadband access means, for interacting by employing a first protocol with a remote site and LAN unit for interacting with a WLAN within building by employing a second protocol that is different from the first protocol is not described in the specification to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Art Unit: 2664

Claim 58, discloses the step of receiving a fixed wireless broadband signal from a source outside the building, the signal is characterized by a first communication protocol and electronic device conditioned to receive signals via the LAN in accord with a second protocol, a second communication protocol that is different from the first protocol is not described in the specification to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim 63, discloses of a second channel that is distinct from a first channel, where the user device employs a first protocol when communicating via the first channel and employs a second protocol that is different from the first protocol when communicating via the second channel is not described in the specification to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Referring to claims 40-42, 44-57, 58-62 and 64, each depend either directly or indirectly from independent claims 39, 43, 58 and 63 and, therefore, are respectfully submitted to be unpatentable over the cited rejection under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement, for at least reason set forth about with respect to claims 39, 43, 58 and 63.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 2664

4. Claims 39-62 rejected under 35 U.S.C. 103(a) as being unpatentable over Zendle et al. (U.S. Patent No. 6,628,627) in view of Mahany et al. (U.S. Patent No. 5,949,776) and further in view of Toporek et al. (U.S. Patent No. 6,654,344).

Referring to claims 39-43, Zendle et al discloses in figures 2, 4 and 5 and respective portions of the specification of a system comprising: an integrator 420 (computer controlled radio system) including a broadband interface unit 505 coupled to a fixed wireless broadband access means (418), for interacting, via a broadband wireless channel (channel 1 or 2 as in figure 2), with a site that is remote (412) from building that houses said fixed wireless broadband access means (414), a local area interface unit (507) for interacting with a wireless local area network (512) within said building, and a modulator/demodulator (modem 506) interposed between said broadband interface unit (505) and said local area interface unit 507 (control LAN with the computer interface taking the form of a standard I/O interface like PCMCIA for WLAN); and a user device (peripheral devices 434 or 512) adapted to communicate with said site via said local area network. Zendle fails to explicitly disclose that the user device is adapted to communicate with the site via LAN and the integrator, or via other than said local area network. Mahany discloses in claim 1 and abstract and respective portion of the specification of a communications network comprising a first wireless network and a second wireless network independently operable from the first wireless network; an access point device operable on the first wireless network as may be applied to (control LAN with the computer interface taking the form of a standard I/O interface like PCMCIA for use in WLAN); a first wireless device selectively communicating with the access point device on the first wireless network; a second wireless device operable on the second wireless network to communicate with the first wireless

Art Unit: 2664

device. Therefore, it would have been obvious to one of ordinary skill in the art to modify the teachings of Zendle to incorporate the teachings including a device to communicate with WLAN and a second wireless network independently as taught by Mahany in order to maintain connectivity and functionality to devices on multiple networks which have different operating parameters while reducing delays and expense with respect to bandwidth limitation. Zendle in view of Mahany fails to disclose a first transmission and reception scheme and protocol that is different from the second transmission and reception schema and protocol. Toporek discloses in figure 1 and respective portions of the specification of where the client device 117 communicates with gateway 111A using a TCP connection (first protocol) that includes LAN network within a building and further discloses that the satellite gateway 111A intercepts a TCP connection from a client and converts data to a satellite protocol for transmission over satellite. Thus, the first transmission and reception scheme uses the XTP protocol for broadband wireless channel transmission, while the second transmission and reception scheme utilizes TCP/IP protocol suite. Therefore, it would have been obvious to one of ordinary skills in the art at the time of the invention to modify the teachings of Zendle in view of Mahany to include the teachings of Toporek employing a second transmission and reception schema and protocol that is different from first protocol in order to provide a controlled flow of information with high speed and quality transmission.

Referring to claims 58, Zendle et al. discloses in figures 2, 4, and 5 and respective portions of the specification of a method of integrating fixed wireless broadband access 418 and a local area radio network 507 (LAN may be wireless since it is disclose in figure 5 and respective portions of the specification of utilizing I/O interface like PCMCIA which are used for

Art Unit: 2664

WLAN communication), comprising the steps of: receiving a fixed wireless broadband signal from a source outside a building (as illustrated in figure 2 and 5); demodulating a fixed wireless broadband signal, processing the demodulated signal to obtain a user signal, and re-modulating the user signal (as the function of the modem 506); and transmitting the user signal to an electronic device (434 or 512) via a local area network (507) within said building when said electronic device is conditioned to receive signals via said local area network (507). Zendle fails to disclose of refraining from transmitting said user signal to said electronic device when said electronic device is conditioned to receive signals via other than said local area network.

Mahany discloses in claim 1 and abstract and respective portion of the specification of a communications network comprising a first wireless network and a second wireless network independently operable from the first wireless network; an access point device operable on the first wireless network as may be applied to (control LAN with the computer interface taking the form of a standard I/O interface like PCMCIA for use in WLAN); a first wireless device selectively communicating with the access point device on the first wireless network; a second wireless device operable on the second wireless network to communicate with the first wireless device. Furthermore, the first wireless device selectively communicates with the second wireless device on the second wireless network after communication an indication of unavailability on the first wireless network to the access point device (based on no signal strength, the communication takes place with a second network which is the other-than LAN network). In other words, when the signal quality is too low, a switch is made to communicate other than LAN and thus implying, the device is refrained from communicating via LAN since the signal indicates unavailability on the first wireless network as claim. Therefore, it would have been obvious to

Art Unit: 2664

one of ordinary skill in the art to modify the teachings of Zendle to incorporate the teachings including a device to communicate with WLAN and a second wireless network independently as taught by Mahany in order to maintain connectivity and functionality to devices on multiple networks which have different operating parameters while reducing delays and expense with respect to bandwidth limitation. Zendle in view of Mahany fails to disclose a first transmission and reception scheme and protocol that is different from the second transmission and reception schema and protocol. Toporek discloses in figure 1 and respective portions of the specification of where the client device 117 communicates with gateway 111A using a TCP connection (first protocol) that includes LAN network within a building and further discloses that the satellite gateway 111A intercepts a TCP connection from a client and converts data to a satellite protocol for transmission over satellite. Thus, the first transmission and reception scheme uses the XTP protocol for broadband wireless channel transmission, while the second transmission and reception scheme utilizes TCP/IP protocol suite. Therefore, it would have been obvious to one of ordinary skills in the art at the time of the invention to modify the teachings of Zendle in view of Mahany to include the teachings of Toporek employing a second transmission and reception schema and protocol that is different form first protocol in order to provide a controlled flow of information with high speed and quality transmission.

Referring to claim 44, Toporek discloses in figure 1 and in col6, lines 6-31 of further comprising a cable modem 119 connected to a cable that includes a wireless local area radio unit that is adapted to operate in accord with said second protocol.

Referring to claim 45, Toporek discloses in figure 1, abstract and respective portions of the specification where said second path either couples said user device (117) directly to said

Art Unit: 2664

site, employing said first protocol (XTP), or couples said user device to said site via said cable modem, employing said second protocol (TCP/IP).

Referring to claim 46, Toporek discloses in figure 1 and respective portions of the specification where said user device system operates pursuant to said second transmission and reception schema and protocol when it employs the first path, and operates pursuant to said first transmission and reception schema and protocol when it employs the second path.

Referring to claims 47-50 and 59-60, Zendle fails to disclose: the system where a determination is made as to whether said user device ought to be conditioned to communicate over said other than said local area network, or via said local area network and said integrator, based on transmission quality based on signal strength or signal interference level or both at said user device; the system where said user device periodically makes said determination; the system where the user device makes said determination or in response to a signal applied to said user device; the system where the device is conditioned to communicate said is directly via said wireless broadband channel when it is conditioned to communicate over said other than said local area network. Mahany discloses in claim 1 and in the abstract and respective portion of the specification of a communications network comprising a first wireless network and a second wireless network independently operable from the first wireless network; an access point device operable on the first wireless network as may be applied to (control LAN with the computer interface taking the form of a standard I/O interface like PCMCIA for WLAN); a first wireless device selectively communicating with the access point device on the first wireless network; a second wireless device operable on the second wireless network to communicate with the first wireless device. Furthermore, the first wireless device selectively communicates with the second

Art Unit: 2664

wireless device on the second wireless network after communication an indication of unavailability on the first wireless network to the access point device (based on no signal strength, the communication takes place with a second network which is the other-than LAN network). Therefore, it would have been obvious to one of ordinary skill in the art to modify the teachings of Zendle to incorporate the teachings including a device to communicate with WLAN and a second wireless network independently as taught by Mahany in order to maintain connectivity and functionality to devices on multiple networks which have different operating parameters while reducing delays and expense with respect to bandwidth limitation.

Referring to claim 51-55 and 57, Zendle et al discloses in figures 2, 4 and 5 and respective portions of the specification of a system comprising: an integrator 420 (computer controlled radio system) including a broadband interface unit 505 coupled to a fixed wireless broadband access means (418), for interacting, via a broadband wireless channel (channel 1 or 2 as in figure 2), with a site that is remote (412) from building that houses said fixed wireless broadband access means (414), a local area interface unit (507) for interacting with a wireless local area network (512) within said building, and a modulator/demodulator (modem 506) interposed between said broadband interface unit (505) and said local area interface unit 507 (control LAN with the computer interface taking the form of a standard I/O interface like PCMCIA for WLAN); and a user device (peripheral devices 434 or 512) adapted to communicate with said site via said local area network. Zendle fails to disclose the system where said user device makes said determination in response to a signal from said integrator; where said device provides to said integrator results of said determination; where said user device provides to said integrator results of said determination in response to an interrogation

Art Unit: 2664

signal issued by said integrator; where said integrator participates in decision whether said user device communicates to said local area network and said integrator, or via said other than said local area network; where said user device provides to said integrator results of said determination each time said user device performs said determination; where said user device decides whether said user device communicates to said wireless broadband channel via the integrator. Mahany discloses in claim figure 45 and respective portions of the specification, where base station 4517 acts as a direct access point to the backbone LAN 4501. The access point may act as an integrator since the access point device is operable on the first wireless network as in claim 1. Mahany further implies in claims 1 and 9 that interrogation signal is issued by the Access Point to the first wireless device indicating its availability (signal strength). The Access Point (functioning as an integrator) participates in decision; whether the first wireless device should communicate to the LAN and the integrator or via other than LAN based on an indication of its availability. The wireless device provides the integrator results of determination each time based on an active communication connection or disconnection and switching communication to second wireless link as claim. Therefore, it would have been obvious to include the teachings of Mahany's invention into Zendle's invention in order to reduce latency and increase efficiency.

Referring to claim 56 and 61, Zendle discloses in figure 4, where said fixed wireless broadband access means is a fixed antenna or a satellite dish 418 mounted in a home or business as claim.

5. Claims 63-64 rejected under 35 U.S.C. 103(a) as being unpatentable over Hensley (U.S. Patent No. 5,898,730) in view of Toporek et al. (U.S. Patent No. 6,654,344).

Art Unit: 2664

Referring to claim 63, Hensley teaches of a method for determining signal quality of a communications channel in a communication system. Hensley discloses in figure 1 of a fixed wireless broadband access and a method of integrating fixed wireless broadband access and a wireless local area radio network, comprising the steps of: determining a signal strength (RSSI) and a channel interference (BER) of a first signal channel source derived from the fixed wireless broadband access and broadcast by the wireless area radio network (as disclosed figure 2 and in figure 5, lines 5-65 and in column 7, lines 1-12); identifying a second signal channel source for the at least one broadband radio frequency signal (as disclosed in column 7, lines 1-12, where multiple signal quality determinations is made); determining a signal strength (RSSI) and a channel interference (BER) of the second signal channel source (as further disclosed in column 7, lines 1-12, and in claims 1-10); determining whether the second signal channel source is better than the first signal channel source (as disclosed in claims 1-10 and in figures 3-7, comparing signal quality determinations with each other); and effecting crossover if it is determined that the second signal channel is better (figures 1 and 8, selecting signal quality determination indicating lowest signal quality as the signal quality of the communications channel) as claim. Hensley fails to disclose of a second channel that is distinct from a first channel, where the user device employs a first protocol when communicating via the first channel and employs a second protocol that is different from the first protocol when communicating via the second channel. Toporek discloses in figure 1 and respective portions of the specification of where the client device 117 communicates with gateway 111A using a TCP connection (first protocol) that includes LAN network within a building and further discloses that the satellite gateway 111A intercepts a TCP connection from a client and converts data to a satellite protocol for

Art Unit: 2664

transmission over satellite. Therefore, it would have been obvious to one of ordinary skills in the art at the time of the invention to modify the teachings of Hensley to include the teachings of Toporek employing a second protocol that is different from first protocol when communicating via the second channel in order to provide a controlled flow of information with high speed and quality transmission.

Referring to claim 64, Hensley discloses in column 7, lines 1-36 of the step of interrogating an electronic device to pass information relating to the at least one broadband radio frequency signal (multiple signal quality determinations) as claim.

Response to Arguments

6. Applicant's arguments with respect to claims 39-64 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

Or faxed to:

(703)305-3988, (for formal communications intended for entry)

Or:

(703)305-3988 (for informal or draft communications, please label "Proposed" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2021 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

Art Unit: 2664

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chirag G Shah whose telephone number is 571-272-3144. The examiner can normally be reached on M-F 6:45 to 4:15, 2nd Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wellington Chin can be reached on 571-272-3134. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

cgs
December 29, 2004


Ajit Patel
Primary Examiner